

Appl. No. : 10/708,249
Amdt. Dated: September 4, 2007
Reply to Office Action of
May 3, 2007

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AMENDMENTS

To the Claims:

This listing of claims will replace all prior versions, and listings, of claims in the application:

1 (Currently amended). A therapeutic shock wave device comprising:

a reflector housing;

a parabolic reflector disposed in the housing; and

an energy source disposed within the parabolic reflector for developing a planar shock wave so that a planar shock wave is formed by the parabolic reflector and emanates emanating from the housing.

2 (Original). The device of claim 1 wherein the parabolic reflector is shaped and dimensioned to provide the planar shock wave having a power density level to produce a tissue reaction in a subject to which the wave is administered.

3 (Original). The device of claim 1 wherein the shock wave has a power density in the range of approximately 0.01 mJ/mm² to 1.0 mJ/mm².

4 (Original). The device of claim 1, and further comprising a coupling member which intersects the reflector along a circle having a diameter in the range of approximately 20 mm to 100 mm.

5 (Original). The device of claim 1 wherein the parabolic reflector has an origin point and a focal point spaced from the origin point a distance in the range of approximately 3 mm to 10 mm.

6 (Original). The device of claim 1 wherein the energy source is an electrohydraulic source.

Appl. No. : 10/708,249
Amtd. Dated: September 4, 2007
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7 (Original). The device of claim 1 wherein the energy source has a propagation point centered approximately at a focal point of the parabolic reflector.

8 (Original). The device of claim 1 wherein the energy source comprises a pair of electrode tips connected to a capacitor.

9 (Original). The device of claim 8 wherein the energy source has a propagation point centered approximately between the electrode tips.

10 (Original). The device of claim 1 wherein the parabolic reflector includes a cavity having an opening and the opening sealed by a membrane.

11 (Original). The device of claim 9 wherein the cavity contains a fluid.

12 (Original). The device of claim 10 wherein the fluid is water.

13 (Currently amended). A method for developing a planar shock wave to be used for therapeutic purposes on a subject, the method comprising the steps of:

generating a spark to cause a spherical shock wave;

shaping and directing the spherical shock wave to create a planar shock wave; and
propagating the planar shock wave toward the subject.

14 (Currently amended). The method of claim 13 further comprising the steps of:
providing a device having a parabolic reflector, an energy source attached to an electrode tip and a membrane disposed across a cavity in communication with the parabolic reflector;

orienting the electrode tip generally at a focal point of the parabolic reflector;
generating the spark at the electrode tip and developing the spherical shock wave;
propagating the spherical shock wave so that it reflects at the parabolic reflector;

and.

Appl. No. : 10/708,249
Amtd. Dated: September 4, 2007
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propagating the planar shock wave through the membrane and toward tissue of the subject to receive the planar wave for therapeutic effect.

15 (Original). The method of claim 13 wherein the planar shock wave generates an immune response in the subject and has a power density in the range of approximately 0.01 mJ/mm² to 1.0 mJ/mm².

16 (Original). The method of claim 14 wherein the parabolic reflector has an opening having a diameter that is in the range of approximately 20 mm to 100 mm.

17 (Original). The method of claim 14 wherein the planar shock wave triggers a physiological repair response in the subject.

18 (Original). A therapeutic method for treating tissue comprising the steps of: generating a planar shock wave; and coupling the planar shock wave to the tissue to be treated.

19 (Original). The method of claim 18 further comprising the steps of:
providing a treatment device that develops the planar shock wave;
orienting the treatment device adjacent to the tissue area; and
activating the tissue in order to cause a chemical release from the tissue cells.

20 (Original). The method of claim 18 wherein the shock wave is generated by electro hydraulic, electromagnetic or piezoelectric means.

21 (Currently amended). The method of claim 18 wherein the step of generating includes comprises the steps of:
generating a spark to develop a shockwave, and
reflecting the shockwave from a parabolic reflector to form a planar shock wave.

Appl. No.: 10/708,249
Amtd. Dated: September 4, 2007
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22 (Original). The method of claim 18 wherein the planar shock wave is administered at a power density sufficient to cause the tissue to be activated to release a protein for generating an immune response.

23 (Original). A therapeutic device for administering a shock wave to a subject comprising:

a housing;
a shock wave source disposed in the housing;
wave directing and shaping structure in the housing responsive to the shock wave for causing a planar shock wave to be emitted from the housing; and
structure for coupling the shock wave to the subject.

24 (Original). The therapeutic device of claim 23 wherein the wave directing and shaping structure includes a parabolic reflector.

25 (Original). The therapeutic device of claim 23 wherein the housing includes an opening and the coupling structure includes a membrane disposed across the opening.

26 (Original). The therapeutic device of claim 25 wherein the wave directing and shaping structure is disposed in a cavity having the opening.

27 (Original). The therapeutic device of claim 23 wherein the shock wave source includes an electrode that develops a spark.